

### **REMARKS**

In response to the final Official Action of December 30, 2009, claim 1 has been amended in a manner which is believed to particularly point out and distinctly claim the invention and claim 1. Support for the amendment to claim 1 is found in the original application as filed, including Figures 1, 2, and 4 and the corresponding descriptions at [0038], [0039], [0042].

In particular, claim 1 has been amended to recite that the dispenser comprises a reservoir which in turn comprises a minor portion in the form of a tapered tip. Such a tapered tip is specifically discussed at paragraph [0039] of the present application as published where it is stated that the level of medicament is within the "tapered tip" when it is close to exhaustion and that this enables the user to easily observe the level of substance remaining when the source approaches exhaustion of the substance. Such language is found in amended claim 1.

### **Claim Rejections - 35 USC §102**

At section 2, claims 1, 3, 9, 11, and 13-17 are rejected under 35 USC §102(b) as anticipated in view of US patent 5,098,291, Curtis, et al (hereinafter Curtis).

With respect to claim 1, it is asserted that Curtis shows a dispenser (Figure 1) for a medicament and propellant that comprises a release valve and a reservoir that includes a major portion having a comparatively large cross-section of its substance space and a minor portion having a comparatively small cross-section of its substance space. The Office further asserts that the reservoir is transparent and the minor portion is the opposite end of the source from the release valve so that a user holding the dispenser valve up can observe the level of the substance in the minor portion and can note a comparatively rapid depletion with use of the quantity of the substance remaining when the source approaches exhaustion of the substance.

For the reasons presented below, applicant respectfully submits that claim 1 as amended is not anticipated by Curtis.

In particular, claim 1 has been amended to recite that the minor portion is in the form of a tapered tip. Curtis does not disclose a reservoir wherein the minor portion at the opposite end of the source from its release valve comprises such a tapered tip and, in particular, does not disclose such a tapered tip which enables the user to easily observe the level of remaining medicament upon inversion of the dispenser close to exhaustion.

Rather, as seen in Figures 1 and 4 of Curtis, the minor portion at the opposite end of the source from its release valve comprises a flat-bottomed surface. The sides of reservoir 11 curve inwardly slightly to arguably produce a "minor portion". However, such a portion does not form a tapered tip as now particularly pointed out and claimed in amended claim 1. Consequently, claim 1, as amended, is not anticipated by Curtis.

In particular, the Office argues that the bottom of pressurized cartridge 11 has a minor portion, but clearly such a minor portion is not tapered as required by amended claim 1 nor is there any indication that whatever curvature is associated toward the bottom of pressurized cartridge 11 is in any way intended to be used to note comparatively rapid depletion of the level of substance within the dispenser as the substance remaining approaches exhaustion. It is therefore also respectfully submitted that Curtis does not anticipate or suggest claim 1 as amended.

Dependent claims 3, 9, 11, 13, and 17 all ultimately depend from amended claim 1 and are all believed to be allowable at least in view of such dependency.

At section 3, claims 1, 3, 6, 7, 11, 14, and 17 are rejected under 35 USC §102(b) as anticipated in view of US patent 3,184,115, Meshberg.

With respect to claim 1, the Office asserts that Meshberg shows an aerosol dispenser comprising a release valve and a reservoir that includes a major portion having a comparatively large cross-section of its substance space and a minor portion having a comparatively small cross-section of its substance space. It is further contended that Meshberg has a reservoir which is transparent and that the minor portion is the opposite end of the source from the release valve so that a user holding the dispenser valve up can observe the level of the substance in the minor portion and

can observe<sup>1</sup> a comparatively rapid depletion with use of the quantity of substance remaining when the source approaches exhaustion of the substance.

Meshberg, like Curtis, fails to disclose or suggest a reservoir having a tapered tip as presented in amended claim 1. Thus, for reasons corresponding to those presented above with regard to Curtis, Meshberg fails to disclose or suggest claim 1 of the present application.

Furthermore, Meshberg discloses the use of reservoirs that have a flat-bottomed surface at the opposite end from its release valve which is arguably the minor portion thereof. This is shown in Figures 1, 8, and 9 of Meshberg. There is, however, no disclosure or suggestion in Meshberg of a portion in the form of a tapered tip that enables easy observation of the level of remaining substance when the substance is close to exhaustion, as required by amended claim 1.

For all of the foregoing reasons, it is therefore respectfully submitted that claim 1, as amended, is neither disclosed nor suggested by Meshberg.

Dependent claims 3, 6, 7, 11, 14, and 17 are also believed to be neither disclosed nor suggested by Meshberg at least in view of their ultimate dependency from amended claim 1.

### **Claim Rejections - 35 USC §103**

At section 5, claims 1, 2, 9, and 10 are rejected under 35 USC §103(a) as unpatentable over US patent 3,506,004, Mann, et al (hereinafter Mann), in view of US patent 4,896,832, Howlett.

The Office asserts that Mann shows an aerosol medicament dispenser comprising a release valve and a reservoir that includes a major portion having a comparatively large cross-section of its substance space and a minor portion having a comparatively small and constant cross-section of its substance space. The minor portion is at the opposite end of the source from its release valve. However, Mann fails

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<sup>1</sup> The Office is believed to have inadvertently not used the word "observe" and rather uses the word "not" at page 3, line 16.

to disclose that the reservoir is translucent or transparent and made of plastic material which the Office relies upon Howlett for showing. The Office also asserts that it would be obvious to one of ordinary skill in the art at the time the invention was made to have manufactured the reservoir and the outer enclosure of Mann out of a transparent plastic with a transparent window as taught by Howlett so as to allow viewing of the level of the contents of the container.

However, neither Mann nor Howlett disclose claim 1 as amended with regard to the specific recitation of a minor portion in the form of a tapered tip so as to allow the noting of a comparatively rapid depletion of the substance in the minor portion with the use of the quantity of substance remaining when the source approaches exhaustion of the substance.

In this regard, the underlying idea of the present invention as set forth in the application is that sources of medicament for inhalers and the like and, in particular, metered dose inhalers, can be provided that allow easy estimation of the number of doses remaining in the source as the substance is close to exhaustion. Such sources are advantageous because they allow users of inhalers to know when they are likely to need a new inhaler, and thus when to carry a replacement, or to refill their prescription, etc. In the present invention, this is achieved by the use of a translucent or transparent reservoir within a dispenser, wherein the reservoir has a major and minor portion, the minor portion being in the form of a tapered tip and being at the opposite end to the release valve of the dispenser. The tapered tip is therefore a distinguishing feature of the present invention since upon inversion of the dispenser, the level of medicament (substance) is within the tapered tip when the medicament is close to exhaustion. This enables the user to easily determine when to replace the dispenser. Additionally, as the use of the dispenser and medicament continues, the tapered tip causes the level of medicament to decrease progressively faster giving the user an indication of when a fresh dispenser will soon be required.

Neither Mann nor Howlett disclose or suggest such a feature as presented in amended claim 1. Mann discloses dispensers comprising a closed housing 21 and a

replaceable aerosol container 20. Specifically, Mann teaches that the housing surrounding the containers must be closed except at the mouthpiece.

This can be seen in Figures 1-3 and 8-10 of Mann and is disclosed at column 4, lines 32-43. The Figures in Mann also depict a reservoir that arguably has a major and minor portion. However, the minor portion is provided by a “depressed zone” 45 which is a recess provided in the reservoir to accommodate the actuating button 43.

Mann is, however, missing two key features of the present invention. There is no teaching in Mann of a minor portion that comprises a tapered tip and there is no teaching in Mann of a reservoir having a transparent or translucent material. Indeed, Mann lacks any teaching at all of being able to observe the medicament level present in its containers. Rather, column 3, lines 10-13 of Mann simply state that when the container is spent, it is substituted by inserting a new container via the cover opening. There is no description of how to determine when the container is spent.

Moreover, it is respectfully submitted that these deficiencies are not remedied by Howlett. Howlett discloses a dispenser having a reservoir having a dividing means therein to prevent contamination of the medicament with the propellant (Howlett, column 1, lines 29-32). Figure 1, for example, demonstrates the use of a piston 5 which divides the container 4 into a medicament fluid 25 forward of the piston and a propellant reservoir 26 rearward of the piston. As argued in applicant’s previous response, this type of dispenser is quite different from the reservoirs of the present invention which comprise a pressurized mixture of medicament and propellant.

As such, it is respectfully submitted that a person of ordinary skill in the art would not be motivated to combine the teachings of these two documents as argued by the Office.

More significantly, Howlett also does not disclose a reservoir having a minor portion in the form of a “tapered tip” as required by amended claim 1. In fact, there is no disclosure in Howlett of a minor portion at all. Rather, it is taught at column 4, lines 7-8 of Howlett that the container 3 is “cylindrical” and at column 4, lines 9-11 that the “container 3 defines a cylindrical chamber 4 within which a free piston 5 is coaxially

slidable". It is therefore clear that Howlett does not suggest to one of ordinary skill in the art a reservoir as presently claimed.

In summary, it is therefore respectfully submitted that neither Mann nor Howlett teaches the use of a reservoir having a minor portion in the form of a tapered tip to enable the level of substance (medicament) to be easily determined. Thus, even if a person of ordinary skill in the art were to combine the teachings of these documents, it is submitted that such a person would not arrive at the present invention as set forth in amended claim 1.

For all of the foregoing reasons, it is therefore respectfully submitted that claim 1 is distinguished over Mann in view of Howlett.

Dependent claims 2, 9, and 10 all ultimately depend from claim 1 and are also believed to be distinguished over Mann in view of Howlett at least in view of such dependency.

At section 6, claim 8 is rejected under 35 USC §103(a) as unpatentable over Meshberg as applied to claim 7 further in view of Summers. Summers, however, does not make up for the deficiencies in Meshberg as discussed above with regard to claim 1 and it is therefore respectfully submitted that claim 8 is distinguished over Meshberg in view of Summers at least in view of such dependency.

In view of the foregoing, it is respectfully submitted that the present application as amended is in condition for allowance and such action is earnestly solicited.

Respectfully submitted,

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